UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,850	02/05/2002	Densen Cao	5061.5 P	9425

7590 12/22/2003

Parsons, Behle & Latimer
Suite 1800
201 South Main Street
P.O. Box 45898
Salt Lake City, UT 84145-0898

EXAMINER	
LEWIS, RALPH A	

ART UNIT	PAPER NUMBER
3732	

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,850	CAO, DENSEN	
	Examiner	Art Unit	
	Ralph A. Lewis	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Rejections based on 35 U.S.C. 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 5-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, line 2, there is no antecedent basis for "said major well."

In claim 5, line 5, the limitation that there is a "housing serving to protect the curing light" is not understood. Light needs no protection. Moreover, it is unclear how the "housing" relates to the previously claimed "wand adapted to be grasped."

In claims 6 and 7, there is no antecedent basis for "said secondary heat sink."

In claim 10, there is no antecedent basis for "said at least one wall of at least one well."

Rejections based on Obvious-type Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4, 11, 12, 19 and 20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-36 of U.S. Patent No. 6,331,111. The patented claims of 6,331,111 set forth all the limitations of the present claims, but present them in a more detailed narrower version than those of the present application. Merely setting forth the already patented structure in broader versions would have been obvious to one of ordinary skill in the art.

Claims 15-10 and 13-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-36 of U.S. Patent No. 6,331,111 in view of Mills (WO 99/16136). The patented claims of 6,331,111 set forth all the limitations of the present claims with the exception of those requiring the secondary heat sink to be elongated. Mills, however, teaches that it is desirable to provide for an elongated secondary heat sink 45, 50, 51, in order to draw heat away from the primary heat sink 48. To elongate the secondary heat sink set forth in the patented claims of 6,331,111 in order to better draw heat away from the primary heat sink as taught by Mills would have been obvious to one of ordinary skill in the art.

Claims 1- 20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

claims 1-20 of copending Application No. 10/016,992;
claims 1-20 of copending Application No. 10/017,272;
claims 1-20 of copending Application No. 10/017,454;

claims 1-20 of copending Application No. 10/017,455;
claims 1-23 of copending Application No. 10/067,692;
claims 1-17 of copending Application No. 10/071,847;
claims 1-17 of copending Application No. 10/072,462;
claims 1-18 of copending Application No. 10/072,613;
claims 1-19 of copending Application No. 10/072,635;
claims 1-20 of copending Application No. 10/072,659;
claims 1-23 of copending Application No. 10/072,826;
claims 1-20 of copending Application No. 10/072,852;
claims 1-17 of copending Application No. 10/072,831;
claims 1-20 of copending Application No. 10/072,853;
claims 1-20 of copending Application No. 10/072,859;
claims 1-20 of copending Application No. 10/073,672;
claims 1-20 of copending Application No. 10/073,819;
claims 1-20 of copending Application No. 10/073,822;
claims 1-19 of copending Application No. 10/073,823; and
claims 1-20 of copending Application No. 10/076,128.

The limitations of the present claims all appear to broader or slightly different obvious versions of the pending claims in the above identified applications. Merely leaving out limitations (e.g. the "wall outlet power adapter" of claim 1 in 10/016,992) in order to make the claims broader or providing for different groupings of the elements set forth in the claims of the above identified pending applications would have been obvious to the ordinarily skilled artisan.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Rejections based on Prior Art

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 11-15 and 18-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Mills (WO 99/16136).

Mills discloses a dental curing light (page 1, second paragraph) comprised of a hand held wand (Figure 5) having a light module 47, an elongated secondary heat sink 45, 50, 51, having a distal end surface serving as a mounting platform on which primary heat sink 48 is mounted and light emitting semiconductors 43 mounted to the primary heat sink 48. In regard to the cover limitation of claims 11 and 13, it is noted that the Mills Led chips 43 are illustrated as coming in a packaged/ dome covered window arrangement and that light guide 41 also serves a cover. In regard to the "controls" and "circuitry" limitations of claims 13, 15 and 19, it is an inherent necessity that the Mills device include an on/off switch.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8, 9, 15, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (WO 99/16136)

In regard to claims 8 and 9, Mills does not expressly state how the LEDs 43 are connected to platform 48, however, the use of a conventional prior art adhesives would have been obvious to one of ordinary skill in the art, it is further noted that all adhesives have at least some degree of heat conductivity and light reflectivity. In regard to claims 15, 19 and 20, Mills does not explicitly appear to state that the disclosed dental photo curing device has an on/off switch (i.e. "controls for initiating and terminating light transmission" and "circuitry in electrical connection with said controls"). The use, however, of a conventional on/off switch to turn the device on and off when being used would have most certainly been obvious to the ordinarily skilled artisan.

Claims 2-4, 6 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (WO 99/16136) in view of Doiron et al (5,698,866).

In Mills the LEDs are mounted directly on a flat heat sink 48. Doiron et al, however, teach that an improvement over mounting diodes on a flat surface (Figures 9 and 10) is mounting them in a well (Figures 11 and 12) formed on the heat sink so that more light from the LEDs is reflected forward in the desired direction. To have mounted the Mills LEDs in wells as taught by Doiron et al so that more light is reflected forward in the desired direction would have been obvious to one of ordinary skill in the art.

Allowable Subject Matter

Claims 7 and 16 would be allowable if rewritten in independent form to include all of the limitations of the claims from which they depend, rewritten to overcome the indefiniteness rejection and a terminal disclaimer filed to overcome the obvious-type double patenting rejections.

Prior Art

Applicant's information disclosure statements of February 05, 2002 and August 14, 2002 have been considered an initialed copy enclosed herewith.

Adam et al (6,419,483 B1), Boutoussov et al (US 6,439,888 B1) , Fregoso (US 6,611,110 B1), Bianchetti et al (EP 1 090 607 A1) and Reipur (WO 02/33312 A2) are made of record.

Any inquiry concerning this communication should be directed to **Ralph Lewis** at telephone number **(703) 308-0770.** Fax (703) 872-9306. The examiner works a compressed work schedule and is unavailable every other Friday. The examiner's supervisor, Kevin Shaver, can be reached at (703) 308-2582.

R.Lewis
December 13, 2003

Ralph A. Lewis
Primary Examiner
AU3732